

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 October 2005 (20.10.2005)

PCT

(10) International Publication Number
WO 2005/099117 A1

(51) International Patent Classification⁷: **H04B 1/707**,
H04L 25/03

(74) Agents: **TRIPOLI, Joseph, S.** et al.; Thomson Licensing
Inc., Two Independence Way, Suite #200, Princeton, NJ
08540 (US).

(21) International Application Number:
PCT/US2004/007676

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(22) International Filing Date: 9 March 2004 (09.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **THOM-
SON LICENSING S.A.** [FR/FR]; 46, quai A. Le Gallo,
F-92648 Boulogne (FR).

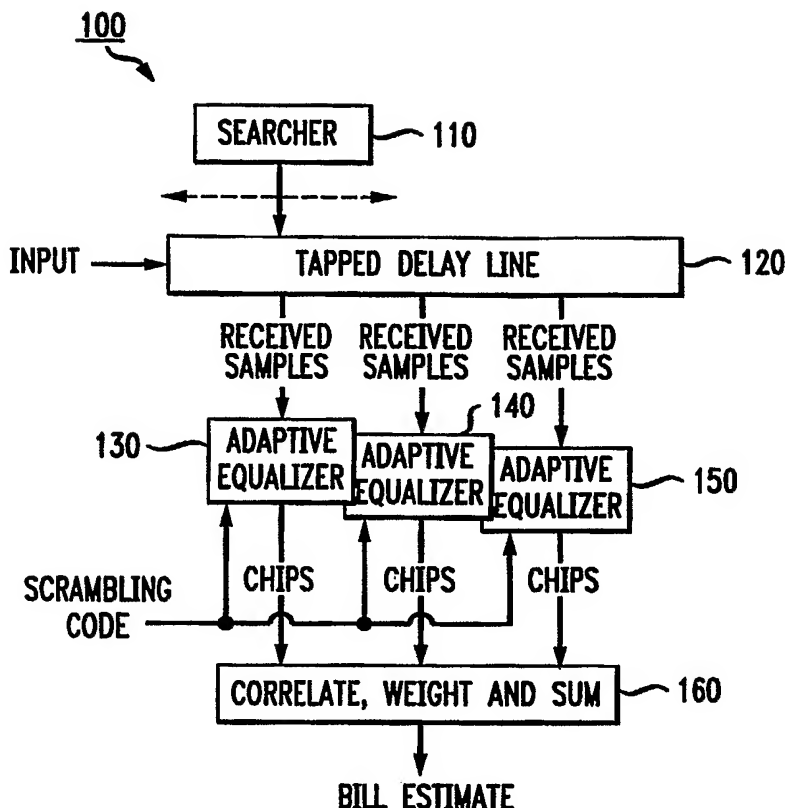
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK,

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **MARGETTS,**
Adam, Robert [US/US]; 1 West Drive, Apt. C2, Prince-
ton, NJ 08540 (US). **KEEL, Alton, Shelbourne** [US/US];
4013 Long Leaf Drive, Melbourne, FL 32940 (US).

[Continued on next page]

(54) Title: HYBRID RAKE/EQUALIZER RECEIVER FOR SPREAD SPECTRUM SYSTEMS



(57) Abstract: There is provided a hybrid rake/equalizer receiver for correlating a delay spread in a spread spectrum system. The hybrid rake/equalizer receiver includes a plurality of adaptive equalizers, each for filtering different regions of the delay spread that have an energy level above a pre-specified threshold to respectively provide equalized-descrambled chip sequences for correlation. Equalizer coefficients respectively corresponding to the plurality of adaptive equalizers are updated individually.

WO 2005/099117 A1



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*